

What is claimed is:

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- Sub 2*
- Oct 2000
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1. A method for forming a polarization-inversed portion comprising the steps of:
 - preparing a substrate made of a ferroelectric single crystal,
 - fabricating a first electrode and a second electrode on a main surface of the substrate in separation,
 - applying a first voltage to between the first electrode and the second electrode to generate and grow a first polarization-inversed portion toward the second electrode from the first electrode,
 - changing the distance between the first electrode and the second electrode, and
 - applying a second voltage to between the first electrode and the second electrode to generate and grow a second polarization-inversed portion, in a different area from that of the first polarization-inversed portion, toward the second electrode from the first electrode.
 2. A method for forming a polarization-inversed portion as defined in claim 1, wherein the distance between the first electrode and the second electrode is widened.
 3. A method for forming a polarization-inversed portion as defined in claim 1, wherein the distance between the first electrode and the second electrode is shortened.
 - ~~4. A method for forming a polarization-inversed portion as defined in any one of claims 1-3, wherein the first electrode is composed of a ctenoid electrode having plural strip electrode pieces, and the distance between the first electrode and the second electrode is controlled through the adjustment of the lengths of the electrode pieces of the first electrode.~~
 - ~~5. A method for forming a polarization-inversed portion as defined in any one of claims 1-3, wherein the second voltage is adjusted in the formation~~

ctenoid = comb-like

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Sub A2

of the second polarization-inversed portion, thereby to control the size of the second polarization-inversed portion.

6. A method for forming a polarization-inversed portion as defined in claim 5, wherein the second voltage is set to be larger than the first voltage.

7. A method for forming a polarization-inversed portion as defined in claim 5, wherein the second voltage is set to be smaller than the first voltage.

Sub A3

8. A method for forming a polarization-inversed portion as defined in any one of claims 1-3, wherein the first electrode is positive and the second electrode is negative.

9. A method for forming a polarization-inversed portion as defined in any one of claims 1-3, wherein a positive potential is applied to the first electrode on a planer electrode, provided on the rear surface of the substrate and connected with the first electrode, being set to be negative.

10. A method for forming a polarization-inversed portion as defined in any one of claims 1-3, wherein a polarization axis of the substrate is inclined from a direction parallel to the main surface.

11. A method for forming a polarization-inversed portion as defined in claim 10, wherein the inclination angle is set to within 0.2-10 degrees.

Sub A4

12. A method for forming a polarization-inversed structure as defined in claims 1-3, wherein plural first polarization-inversed portions and plural second polarization-inversed portions are formed to constitute a periodical polarization-inversed structure.